LISTING OF THE CLAIMS:

The following is a complete listing of all the claims in the application, with an indication of the status of each:

1. (Currently Amended) A method for authenticating a user ~~an~~ and for input of control information for an electronic device, said method comprising:

acquiring through a scanner incorporated into a pointing device at least two fingerprint images of a finger;

computing image correlations between the acquired fingerprint images;

extracting from each said fingerprint image at least one contact parameter, calculated by the step of computing image correlations, the contact parameter being determined between image attributes in each said fingerprint image; and

using said fingerprint images and said at least one contact parameter to authenticate said user and to control said electronic device.

2. (Original) A method as in claim 1, wherein said contact parameter is rotation.

3. (Original) A method as in claim 1, wherein said contact parameter is translation.

4. (Original) A method as in claim 3, further comprising calculating pitch and roll rotations.

5. (Previously Presented) A method as in claim 1, wherein the step of computing image correlations is performed for a single portion of said image.

6. (Previously Presented) A method as in claim 1, wherein the step of computing image correlations is performed between a multiplicity of small regions.

7. (Previously Presented) A method as in claim 1, further comprising the step of determining the rate of change of some control parameter where a rotation or translation of said finger relative to a reference position is used to determine the rate of change of some control parameter of the computer.

8. (Previously Presented) A method as in claim 7, further comprising the steps of:

measuring a pitch and roll rotation of said finger; and

using measured pitch and roll rotation to control the position of a cursor in the computer.

9. (Previously Presented) A method as in claim 7, wherein said the reference position is the position at which contact with the scanner is first registered, further comprising the step of resetting the reference point every time the finger reestablishes contact with the scanner.

10. (Previously Presented) A method as in claim 1, further comprising the step of comparing successive, and possibly consecutive, images taken from a single period of contact of said finger with said scanner.

11. (Currently Amended) A method as in claim 1 wherein at least one of said fingerprint images is a reference image captured previously.

12. (Original) A method as in claim 11 wherein the reference image is labeled with known rotation information.

13. (Currently Amended) A method as in claim 12, further comprising the step of prompting the user to present the finger at known rotations in an enrollment stage to

provide said known rotation information.

14. (Currently Amended) A system for authenticating a user and for input of pointing information for a computer, said system comprising:

a fingerprint image acquisition scanner incorporated into a pointing device for acquiring at least two fingerprint images of a finger, wherein said scanner is able to capture successive images of a finger in motion on a surface of said scanner;

computing means for computing image correlations between the acquired fingerprint images;

an image processor for extracting from said fingerprint image at least one contact parameter calculated by said computing means, other than any optional authentication status data for said fingerprint image; and

means for using said successive fingerprint images and said at least one contact parameter to control a pointing device and to authenticate said user.

15. (Currently Amended) A system as in claim 14 wherein a multiplicity of variations in each of said contact parameters ~~are~~ is used to verify an acquisition of data in real time from a live user.

16. (Previously Presented) A system as in claim 15, said system further comprising means for directing a user to follow through on any combination of a multiplicity of prompts including: change a position of, add pressure to contact or rotate said finger from which a fingerprint image is acquired and wherein said multiplicity of prompts are verified by the system to ensure that the data is being generated at the time of direction.

17. (Previously Presented) A system as in claim 14, said system further comprising means for prompting the user to enact a sequence of finger actions previously registered by the user as a "password" for the device.

18. (Previously Presented) A system as in claim 14 wherein a motion of the finger tip is interpreted as a gesture for recognition by a gesture engine.

19. (Original) The system of claim 14, further comprising:

a feature extraction processor for extracting representative features from said fingerprint image;

a memory for storing representative features of at least one authorized user; and

a feature comparison processor for comparing said stored representative features with said extracted representative features, and generating authentication status data therefrom.

20. (Original) A system as in claim 19 wherein an identity of a user is used to set customized features of the computer.

21. (Original) A system as in claim 19 where the identity of said user is used to set customized parameters of the pointing device.

22. (Currently Amended) A system for imaging a fingerprint for input of control information for an electronic device, said system comprising:

a fingerprint image acquisition scanner <u>incorporated into a pointing device</u> for acquiring at least two fingerprint images of a finger, wherein said scanner is able to capture successive images of a finger in motion on a surface of said scanner;

computing means for computing image correlations between the acquired fingerprint images; and

an image processor for extracting from said finger print image at least one contact parameter, representing the angle of the finger in relation to the scanner, where said angle is calculated by said computing means as correlations between image attributes of two or

more images acquired from fingerprint image acquisition scanner,

wherein said successive fingerprint images and said at least one contact parameter are used for control of said electronic device and for authentication of a user.

23. (Currently Amended) A system for authenticating a user and for input of pointing information for a computer, said system comprising:

a multiplicity of fingerprint image acquisition scanners incorporated into a pointing device providing a large input surface for acquiring successive fingerprint images of a finger;

computing means for computing image correlations between the successively acquired fingerprint images; and

an image processor for extracting from each said fingerprint image at least one contact parameter calculated by said computing means, other than any optional authentication status data for said fingerprint image; and

means for using said fingerprint images and said at least one contact parameter to authenticate said user and as input of pointing information for a computer.

24. (Original) A system as in claim 23, where the scanner consists of a one-dimensional array of small fingerprint scanners.

25. (Original) A system as in claim 24, where the scanner consists of a two-dimensional array of small fingerprint scanners.

26. (Original) A system as in claim 17, where the "password" is a sequence of touching individual small fingerprint scanners in a specific order with the same finger.

27. (Original) A system as in claim 26, where the password is a sequence or touching individual small fingerprint scanners in a specific order, with more than one finger being

used in the sequence either serially or in parallel.